

ABSTRACT OF THE DISCLOSURE

According to the invention, a metal salt and an oxygen source are applied to penetrate
5 or impregnate a suitable substrate sequentially in effective amounts so as to react in contact with
the substrate and produce a mineral compound fixed within the surface of the substrate. The
inventive combination of a mutually compatible metal salt, oxygen source, and substrate brings
about an in situ reaction, and modifies the substrate to bring about a lasting desired effect. The
mineral compound that is produced according to the invention is linked to the substrate, is stable
10 and long-lasting or permanent, and is immobilized or insolubilized in the substrate. The mineral
compound is bound or contained within and on the surface of the substrate, so it may be said
to be ingrained in the fibers or matrix of the substrate, or embedded within the substrate. The
desired effect is preferably a color. A wide variety of metal salts may be used depending on the
desired effect. The oxygen source is preferably a peroxide, and the substrate is preferably a
15 cellulose product such as wood, cotton, or paper; leather; or masonry. The invention
contemplates methods of treating substrates, treatment kits, and treated products. With wood
products, the invention provides a water-based stain of low toxicity useful for soft woods.